

Application: 10,077,732
Applicant: Nikolich
Art Unit: 3651
Examiner: Crawford

September 12, 2004

Informal Letter

Claim 12. Apparatus according to claim 19 wherein,

the capacity of the supply bins is less than that of the storage bins,

the computer means is operable for sensing the number of articles in the supply bins and in the storage bins and, in response to the number in the supply bins being less than that in the storage bins, being capable of setting up a control signal,

the computer means being capable of transmitting said control signal to the printer, and the printer in response to receiving said control signal, being capable of printing a pick list containing the difference between the number of articles in the supply cart and the number in the storage cart.

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Statement of
Claims in application

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13. A method for distributing a plurality of articles of different kinds, comprising the steps,

providing a storage area and a cart in the storage area,
the storage cart having a plurality of bins for supporting
and identifying said articles,

providing a plurality of receiver areas at substantial distances
from the storage areas and the receiver areas being adapted to be
occupied by receivers capable of receiving said articles,

providing a plurality of supply carts at distributed locations,
the supply carts having bins respectively identical with the bins in
the storage cart and having indicia identifying said articles put therein,

the supply carts being open and thereby enabling any person to
withdraw articles therefrom and transport them to the receiver area,

providing supplemental panels having manually actuated means
for registering articles placed in and withdrawn from the bins,

manually actuating the registering means, and

utilizing the computer means to register the difference in numbers
of articles in the storage cart and the supply cart.

Claim 14. (currently amended) A method according to claim 13, (an) and=including the steps, maintaining the supply cart in open condition indefinitely, withdrawing articles continuously throughout a pre-determined overall period, independently of operation of other steps, and restocking articles from the storage cart through the supply cart, independently of operation of other steps.

Claim 15. A method according to claim 14 and including the steps of providing a single such storage cart, and a plurality of such supply carts at locations at substantial distances from the storage cart and from each other, and

utilizing each supply cart independently from each other for transmitting said signals to the storage cart.

Claim 16. A method according to Claim 13 and

providing a security camera and utilizing it for operably photographing the supply cart throughout said predetermined period of operation of the supply cart.

Claim 17. Apparatus for use in distributing a plurality of articles of different kinds throughout a facility that has a central storage area, and a plurality of user areas distributed in the facility at substantial distances from the storage area, comprising,

a storage cart in the storage area having a plurality of storage bins for holding a corresponding number of said articles of different kinds,

the storage cart having labels individually identifying articles in the storage bins.

an open supply cart adjacent to each of the user areas and having supply bins for receiving and holding said articles, and the supply cart having labels individually identifying articles in the supply bins,

supplemental panels having push buttons operably associated with the storage bins,

the apparatus including a computer for registering signals from the push buttons,

the computer being operably associated with each supply cart, and operable in response to actuation of the push buttons in the respective supplemental panel for recording the withdrawing of articles from the supply cart, and including means for providing alert signal in response, to the presence of hazardous materials in the articles.

19. Apparatus for use in distributing a plurality of articles of different kinds throughout a facility that has a central storage area, and a plurality of user areas distributed in the facility at substantial distances from the storage area,

a storage cart in the storage area having a plurality of storage bins for holding a corresponding number of said articles of different kinds,

the storage cart having labels individually identifying said articles in the storage bins,

an open supply cart having a plurality of shelves and bins on the shelves, adjacent to each of the user areas,

a control panel corresponding to each of the shelves in each supply cart, and being separate in construction from the shelf and thereby being detachably mountable thereon,

the control panels being capable of being put in operable position independently of other elements on the shelves,

the control panels having manually actuatable control buttons respectively corresponding to and identifying said articles, and being closely adjacent the articles when the control panels are in operative position,

the panels being so positioned, when in operative position, as to enable a user to actuate a control button in the same movement of the hand used in placing said articles in the supply cart and removing them therefrom.

Claim 20. Apparatus for use in distributing a plurality of articles of different kinds throughout a facility that has a central storage area, and a plurality of user areas distributed in the facility at substantial distances from the storage area, comprising,

a storage cart in the storage area having a plurality of storage bins for holding a corresponding number of said articles of different kinds,

the storage cart having labels individually identifying said articles in the storage bins,

an open supply cart having a plurality of shelves and bins on the shelves, adjacent to each of the user areas,

a control panel corresponding to each of the shelves in each supply cart, and being separate in construction from the shelf and thereby being detachably mountable thereon,

the control panels being capable of being put in operable position independently of other elements on the shelves,

the control panels having manually actuatable control buttons respectively corresponding to and identifying said articles, and being closely adjacent the articles when the control panels are in operative position,

the panels being so positioned, when in operative position, as to enable a user to actuate a control button in the same movement of the hand used in placing said articles in the supply cart and removing them therefrom.

23. Apparatus according to claim 19 wherein,

the capacity of the supply bins is less than that of the storage bins,

the computer means is operable for sensing the number of articles in the supply bins (and in the storage bins) and, in response to the number in the supply bins being less than (that) a predetermined safety level in the storage bins, being capable of setting up a control signal,

the computer means being capable of transmitting said control signal to the printer, and the printer, in response to receiving said control signal, being capable of printing a pick list containing the difference between the number of articles in the supply cart and ~~(the number in the~~ storage cart) a predetermined maximum level in the storage bins.

Claim 26. Apparatus for use in distributing a plurality of articles of different kinds throughout a facility that has a central storage area and a plurality of user areas distributed in the facility at substantial distances from the storage area, comprising

a storage cart in the storage area having a plurality of storage bins for holding a corresponding number of said articles of different kinds,

the storage cart having labels individually identifying articles in the storage bins, the panels of the second set are mountable on the supply cart in operable position to the panels of the main set respectively, and

the panels of the second set are mountable on the supply cart in operable position wherein they mechanically inhibit the actuation of the push buttons of the main set.

Claim 32. A method according to claim 13, and including the steps, utilizing a bar code reader as an auxiliary means of registering articles placed in and withdrawn from the bins.

Claim 33. A method according to claim 13, and including the steps, utilizing a radio-frequency (RF) identification reader as an auxiliary means of requesting articles placed in and withdrawn from the bins.

Claim 34. A method according to claim 13, and including the steps, utilizing an infrared (IR) reader as an auxiliary means of requesting articles placed in and withdrawn from the bins.

Claim 35. A method according to claim 13, and including the steps, utilizing an auxiliary keypad as an auxiliary means of requestin articles placed in and withdrawn from the bins.

Claim 36. A method according to claim 35, and including the steps, utilizing a bar code reader as an auxiliary means to identify the users of the articles withdrawn.

Claim 37. A method according to claim 35, and including the steps, utilizing a radio-frequency (RF) identification reader as an auxiliary means to identify the users of the articles withdrawn.

Claim 38. A method according to claim 35, and including the steps, utilizing an infrared (IR) reader as an auxiliary means to identify the users of the articles withdrawn.

Claim 39. A method according to claim 35, and including the steps, utilizing an auxiliary keypad as an auxiliary means to identify the users of the articles withdrawn.

Claim 40. A method according to claim 13, and including the steps, submitting a charge event to a billing system when a user is identified and an article is withdrawn from a bin.

Claim 41. A method according to claim 13, and including the steps, submitting an assignment event to a manufacturing management system when a user is identified and an article is withdrawn from a bin.